Social Analogy Supports the Monadic Theory

I venture to include in this chapter mention of a theory of morphogenesis put forward by a distinguished biologist as a non-vitalistic theory. Professor S. J. Holmes *(The Problem of Organic Form,* 1927) sets out by showing the failure of all the mechanistic theories. * The theory of qualitative nuclear division as a basis for differentiation can now be regarded, I believe, as quite definitely set aside. The doctrine of organ-forming germinal areas so ingeniously developed by His can no longer afford a theoretical basis for development, since cytoplasmic differentiation has been shown to be the product of development, and not its necessary antecedent. From now on, theories of development and regeneration must start with the totipotency of the nuclei, the absence of qualitative division, and also with the fact that, when sufficiently undeveloped, the cytoplasm also is totipotent.

In other words, the egg is, as Hertwig contended, essentially isotropic. Each part of it can produce any part of the organism.' And, as Driesch insists, the role assumed by each cell in the embryo is, in large measure, a function of its position in the whole. * It is perfectly plain that organisms must possess some power of regulation so that departures from the norm automatically bring about their own check. And any theory of development or regeneration which provides no explanation for this capacity of living organisms is obviously inadequate. Organisms can be thrown off the track of normal

development in a thousand ways ; yet, instead of continuing to become more abnormal, they get back sooner or later upon the right path. And their ways of getting back are multitudinous. If they are prevented from employing one